

L1: Entry 1 of 1

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TITLE: Air cleaner using photocatalyst

INVENTOR: BAE, S S

PATENT-ASSIGNEE: BAE S S (BAESI)

PRIORITY-DATA: 2002KR-0047194 (August 9, 2002)

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PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> KR 2004014028 A	February 14, 2004		001	B01D053/90

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
KR2004014028A	August 9, 2002	2002KR-0047194	

INT-CL (IPC): B01 D 53/90

ABSTRACTED-PUB-NO: KR2004014028A

BASIC-ABSTRACT:

NOVELTY - An air cleaner comprises an air inlet comprising a multifunctional composite filter device for filtering fine dust, and an air outlet comprising a blower for circulating air into inside and outside of base frame. Photocatalyst laminated plates on which titanium dioxide (TiO₂) photocatalyst is laminated as a rough surface of nano odor and ultraviolet lamps from which 1 micro W/cm² or more of ultraviolet rays having a wavelength of 380 nm are emitted are in an air circulation region inside the base frame to perform photocatalyst reaction by irradiation of the ultraviolet rays so that noxious gases in air from which dust is filtered by the filter device are decomposed into innocuous substance by the photocatalyst reaction to clean the air.

DETAILED DESCRIPTION - The multifunctional composite filter device (3) is inside the air cleaner (1) at the side of the air inlet (2), and the blower (4f) driven by a motor is at the side of the air outlet (4), so that indoor air is circulated from the air inlet of the base frame (1a) to the air outlet by blowing force of the blower. The photocatalyst laminated plates (5) are in all directions on an inner surface of all sides of the base frame, and photocatalyst laminated cylinder (5d) formed in a mesh and photocatalyst laminated fan (5f) are in the air circulation region of the central part of the base frame, such that the cylinder and fan are rotated to a low speed of about 60-100 revolutions per minute. The ultraviolet lamps (6) are on proper positions inside a space of the base frame, such that they are controlled by a power controller (7).

USE - As photocatalytic air cleaner.

ADVANTAGE - The novel device further improves air purifying function by using titanium dioxide (TiO₂) photocatalyst laminated plates and ultraviolet lamps at air circulation region inside a base frame.

DESCRIPTION OF DRAWING(S) - The drawing shows the above device.

air cleaner 1

base frame 1a

air inlet 2

composite filter 3

air outlet 4

blower 4f

laminated plate 5

cylinder 5d

fan 5f

UV lamp 6

power controller 7

ABSTRACTED-PUB-NO: KR2004014028A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1/10

DERWENT-CLASS: D22 J04

CPI-CODES: D09-B; J04-E09; N06-D; N07-L01C;

